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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,505	04/15/2004	Kazuyuki Yamasaki	925-289	6564

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EXAMINER	
BARRY, CHESTER T	
ART UNIT	**PAPER NUMBER**
1724	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/824,505	YAMASAKI ET AL.	
	Examiner	Art Unit	
	Chester T. Barry	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,9,10,15 and 21-95* is/are pending in the application.

4a) Of the above claim(s) *1,9,10,15,37-39,65-69,84-87 and 91-95* is/are withdrawn from consideration.

5)☒ Claim(s) *23-36,40-64,70-83 and 88-90* is/are allowed.

6)☒ Claim(s) *21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's election without traverse is noted.

Claims 21-36, 40-64, 70-83, 88-90 are elected.

Claims 21 – 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether "microorganically" means "by means of microorganisms" or "by means of organic chemistry on a small volume scale." Correction is required.

Claims 21-22 are rejected under 35 USC Sec. 102(b) as anticipated by WO00/78402 or by USP 6656722 to Ruitenberg. USP 6656722, equivalent to WO00/78402 published 12/28/2000, describes a metal containing waste water treatment method for carrying out waste water treatment by microorganically (Abstract) oxidizing trivalent arsenic (col 1 line 25) in the arsenic containing waste water to pentavalent arsenic (claim 1) by an arsenic oxidizing bacterium.

Per claim 22, a pH adjuster is added (col 3 line 43). Excess ferric ion effects precipitation of the pentalvalent arsenic (col 2 lines 60-61), so the ferric ion functions as a coagulant.

Claims 23-36, 40-64, 70-83, 88-90 are allowable.

With respect to claim 40, JP 59-095991 describes a metal containing waste water treatment method for treating gallium, arsenic and water in a gallium arsenide waste water, separately collecting the gallium, arsenic and water, collecting the gallium and arsenic as valuable substances and meanwhile collecting the water as a raw water for another use. It does not teach or suggest use of the water in a subsequent (downstream) ultrapure water generating system, thereby establishing a completely closed treatment system.

Many prior art processes are known for treating and/or recovering arsenic from wastewater and other sources. For example, in U.S. Pat. No. 4138231, Hedenas et al. describe a procedure for wet-cleaning gases containing sulfur dioxide, arsenic and halogens produced in the pyrometallurgy of sulfidic materials. The gases are washed with diluted sulfuric acid in a closed loop and arsenic is recovered as an arsenic trioxide product by precipitating arsenic trioxide with sulfides or by alkalinizing the solution, however, the prior art fails to describes or suggest a metal containing waste water treatment method for treating gallium, arsenic and water in a gallium arsenide waste water, separately collecting the gallium, arsenic and water, collecting the gallium and arsenic as valuable substances and meanwhile collecting the water as a raw water for an ultrapure water generating system, thereby establishing a completely closed treatment system.

Chester T. Barry

CHESTER T. BARRY
PRIMARY EXAMINER

571-272-1152